# A REVIEW

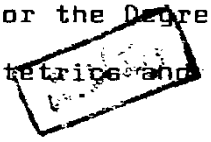
# Of Nutrition during pregnancy And Lactation

A Thesis

Presented in Partial Fulfillment

for the Degree of M.S.

(Obstetrics and Gynaecology)



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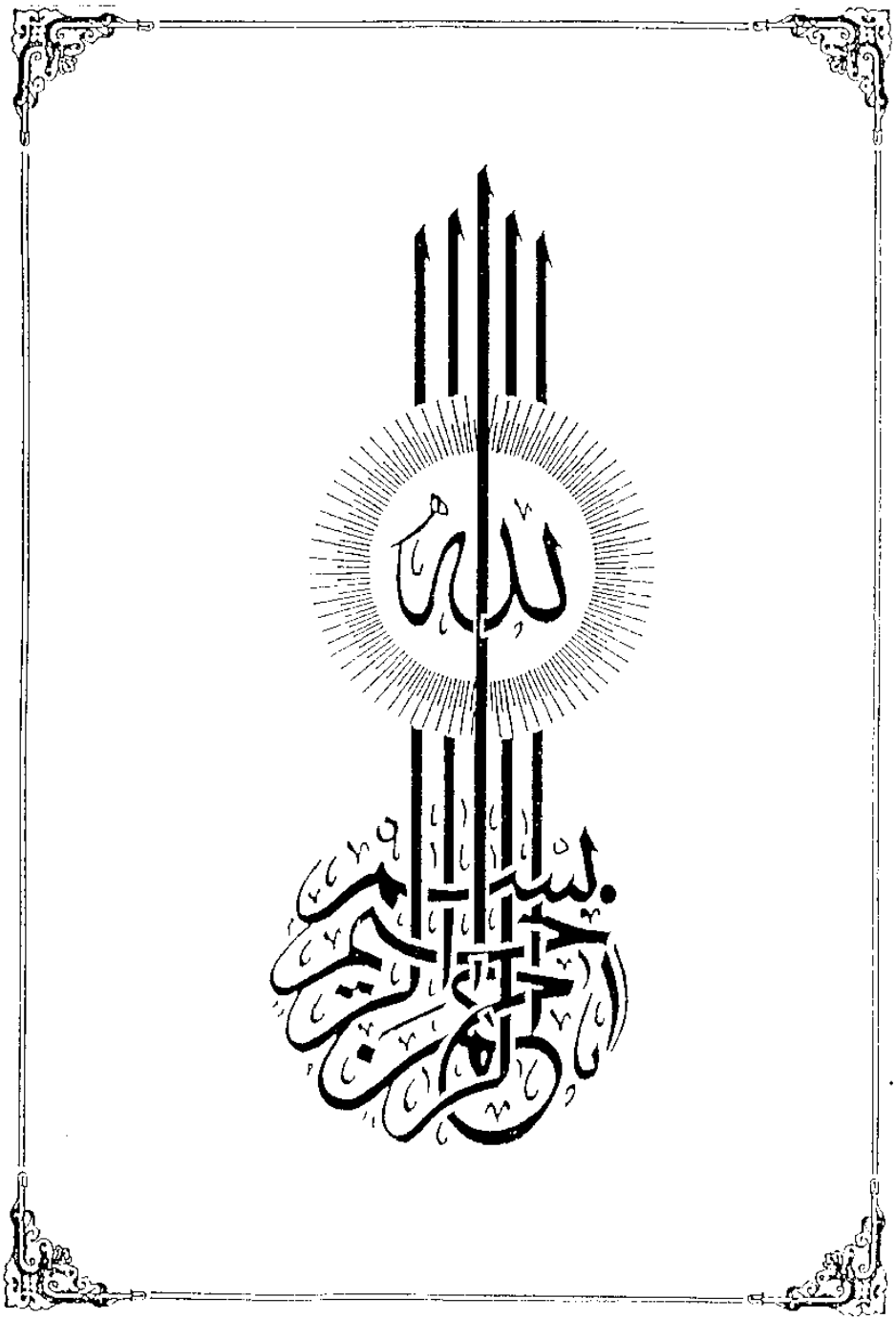


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# INTRODUCTION

Dietetics is really a very young branch of science; it was not indeed until the middle of the last century that it could fairly be described as a science at all. This, it need hardly be said, was inevitable, for diet could not be studied satisfactorily until organic chemistry and the physiology of nutrition had made considerable advances.

Of all periods in the life cycle, pregnancy is one of the most critical and unique.

The unique nature of pregnancy lies in the fact that at no other time is the well-being of one individual so directly dependent on the well being of another.

The low serum values of nutrients commonly seen during pregnancy and the tendancy of the kidneys to excrete greater amounts have posed problems for setting nutrient requirements and making dietary recommendations. Some of the blood values typical in pregnancy would be judged borderline or deficient if they were seen in a nonpregnant woman.

In nutrition assessment in pregnancy, which is a time in the human life cycle when nutrition is of special importance it is particularly necessary to learn who the mother is, where she is, what her needs are, and how they can best met.

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Maternal nutrition appears to be the single most important factor determing the quantity of breast milk.

The effects of maternal nutrition on the quality and quantity of breast milk and the duration of breast feeding are well reviewed.

In the face of maternal malnutrition, milk quality is gererally spared at the experse of quantity and duration of lactation.

## AIM OF THE THESIS:

Is to over veiw the literature to give a comprehensive and concised reference of this important item in our care of the pregnant and lactating mothers.

We hope that we may construct a recommended frame of nutritional planning to this sector of our community.

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## THE NATURE OF FOODS

**Man** eats for three main general reasons; to satisfy hunger, for pleasure or custom.(1)

**One** of the most remarkable things about nutrition is the fact that there is no such thing as an ideal diet.

**A diet** is the total food consumed by an individual. The portion of food or foods taken at some particular and usually stated or fixed time is termed meal.

**Nutrition** is defined as the Dynamic process by which the organism utilizes food(2).

**The** human body is the host; food is that of the environment which we normally consume, and the agent in nutrition is that part of food which nourishes the body and is termed nutriment (previously termed nutrient).(1)

### NUTRIMENT CLASSIFICATION:

**Traditionally** nutriments are classified into; carbohydrate, fat, protein, vitamins and minerals irrespective of the amount needed by the body. Thus another recent classification was introduced based on the amount consumed and required by the individual. In this classification nutriments were divided into macro and micro-nutriments.

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**Macro-nutriments,** form the bulk of any diet, consist of carbohydrates, fat and protein. They are all a source of energy and comprise most of the body. The micro-nutriment include both vitamins and elements.(1)

Taking the classification of a special joint committee of the wartime combined food board [ **food consumption levels,1944]**(2) and slightly rearranging some of its items and expanding it some what. It is as follows:-(2)

GROUP I: Oils and fats, including butter and margarine; sugars and syrups; cereals; potatoes; pulses and nuts.

GROUP II: Milk and milk products,excluding butter; meat, including cured and canned meat and meat extracts,jellies;poultry;fish;eggs.

GROUP III: Fruit and fruit products; vegetables, leafy; other vegetables, including many vegetable fruits.

GROUP IV: BEVERAGES

GROUP V: Condiments.

It will be seen that the first group consists of foods mainly taken for the production of calories, though butter

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and some of the other fats, cereals and potatoes, pulses and nuts also supply vitamins, and cereals, potatoes, pulses and nuts supply protein and mineral elements.

The second group of foods is taken mainly for body building purposes, though again all supply vitamins and mineral elements in addition.

Group III supplies mainly vitamins and inorganic elements, their energy- producing and body- building powers being almost negligible.

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## FOODS TAKEN MAINLY FOR ENERGY PURPOSES

### ENERGY:

Energy is required for the activity of the body and is derived from oxidative processes.(1)

Half of the energy for living is spent on the basic processes which keep us alive, such as breathing, heart beat, hormone synthesis, and the production of electrochemical gradients which produce nerve impulses. The other half is used for the extra work done in addition to these basic processes. (3)

The unit of energy is the joule (J) which is defined as the work done in moving a body a distance of one meter against a force of one neuton (N).

$$J = N.m$$

The neuton (N) is a unit of force which is applied to a mass of 1 kilogram, and give it an acceleration of 1 meter per second.

The calorie is defined as the amount of heat which is needed to raise the temperature of one gm. of water , one degree centigrade.(1)

$$1\ KCal = 4.19\ J.$$

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